



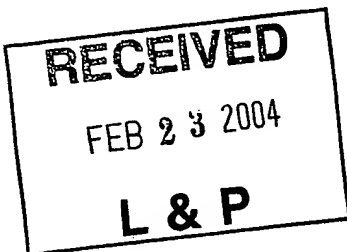
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09/587,913	06/06/2000	Roe Mitrani	U-012803-6	8871

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EXAMINER

NGUYEN, TOAN D

ART UNIT PAPER NUMBER

2665

DATE MAILED: 02/18/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/587,913

Applicant(s)

MITRANI ET AL.

Examiner

Toan D Nguyen

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8-12, 15-18, 20-21, 24-28 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Thadani et al. (U.S. Patent 5,648,965).

For claim 1, Thadani et al. disclose method and apparatus for dynamic distributed packet tracing and analysis, the method comprising:

specifying at least one packet filtering criterion (figure 2, col. 6 lines 1-9);

transmitting one or more data packets meeting the at least one criterion through the network from one of the end-point to another (figure 1, col. 4 lines 5-42);

intercepting at least one of the data packets meeting the criterion using the network agents at one or more of the respective locations in the network traversed by the at least one of the data packets (figure 1, col. 4 lines 19-42);

recording information regarding the at least one intercepted packet at the one or more respective locations (figure 1, col. 4 lines 19-42); and

processing the recorded information to analyze a route of the at least one intercepted packet through the network (figure 1, col. 4 lines 62-67 and col. 5 lines 1-16).

For claim 2, Thadani et al. disclose wherein specifying the at least one packet filtering criterion comprises specifying a pattern of data to appear in the one or more packets to be transmitted (figure 2, col. 6 lines 1-9).

For claim 3, Thadani et al. disclose wherein specifying the at least one packet filtering criterion comprises specifying information associated with a data protocol in accordance with which the packets are to be transmitted (figure 1, col. 3 lines 39-67).

For claims 4-5, Thadani et al. disclose wherein specifying the information associated with the data protocol comprises specifying a Transport Control Protocol (TCP) sequence number to be assigned to the one or more packets to be transmitted (col. 3 lines 64-67).

For claim 8, Thadani et al. disclose wherein the network agents comprise software processes running on nodes of the network at the respective locations (figure 1, col. 3 lines 39-67).

For claim 9, Thadani et al. disclose wherein the network agents comprise stand-alone probes (figure 1, col. 4 lines 5-7).

For claim 10, Thadani et al. disclose wherein recording the information comprises recording times of arrival of the at least one intercepted packet at the respective locations (col. 3 lines 45-47 and col. 4 lines 25-42).

For claim 11, Thadani et al. disclose wherein processing the recorded information comprises determining, responsive to the times of arrival, transit times of the at least one intercepted packet over network links connected to the respective locations and traversed by the at least one intercepted packet (col. 3 lines 45-67 and col. 4 lines 4-18).

For claim 12, Thadani et al. disclose wherein intercepting the at least one of the data packets comprises intercepting multiple data packets (figure 1, col. 4 lines 25-42), and wherein determining the transit times comprises detecting a jitter in transit of the packets over one of the links (col. 4 lines 56-61).

For claim 15, Thadani et al. disclose wherein processing the recorded information comprises determining which of a plurality of links in the network were traversed by the at least one intercepted packet (figure 1, col. 3 lines 16-26).

For claim 16, Thadani et al. disclose method and apparatus for dynamic distributed packet tracing and analysis, the method comprising:

one or more network agents, adapted to be coupled to the network at respective locations (figure 1, col. 3 lines 16-26) and to intercept data packets that meet a predetermined packet filtering criterion and traverse the respective locations (figure 1, col. 4 lines 19-42), and to record information regarding the intercepted data packets (figure 1, col. 4 lines 19-42); and

a testing center (figure 1, col. 4 lines 5-18), configured to convey the criterion to the network agents and to cause one or more data packets meeting the criterion to be transmitted through the network from one of the end-points to another (col. 4 lines 5-42), and to process the information recorded by the network agents in order to analyze a route of the at least one intercepted packet through the network (figure 1, col. 4 lines 62-67 and col. 5 lines 1-16).

For claim 17, Thadani et al. disclose at least one traffic agent, which is configured to receive instructions from the testing center and, responsive thereto, to transmit the packets meeting the criterion from the one of the end-points to the other (figure 1, col. 4 lines 5-42).

For claim 18, Thadani et al. disclose wherein the packet filtering criterion comprises a pattern of data that is included in the packets transmitted by the at least one traffic agent (figure 2, col. 6 lines 1-9).

For claim 20, Thadani et al. disclose wherein the packet filtering criterion comprises information associated with a data protocol in accordance with which the traffic agent transmits the packets (figure 1, col. 3 lines 39-67).

For claim 21, Thadani et al. disclose wherein the information associated with the data protocol comprises a Transport Control Protocol (TCP) sequence number used by the at least one traffic agent (col. 3 lines 64-67).

For claim 24, Thadani et al. disclose wherein the network agents comprise software processes running on the nodes of the network at the respective locations (figure 1, col. 3 lines 39-67).

For claim 25, Thadani et al. disclose wherein the network agents comprise stand-alone probes (figure 1, col. 4 lines 5-7).

For claim 26, Thadani et al. disclose wherein the one or more network agents are operative to record times of arrival of the at least one intercepted packet at the respective locations (col. 3 lines 45-47 and col. 4 lines 25-42).

For claim 27, Thadani et al. disclose wherein the testing center is operative to determine, responsive to the recorded times of arrival, transit times of the at least one intercepted packet over the network links connected to the respective locations and traversed by the at least one intercepted packet (col. 3 lines 45-67 and col. 4 lines 4-18).

For claim 28, Thadani et al. disclose wherein the one or more network agents are operative to intercept multiple data packets (figure 1, col. 4 lines 25-42),, and wherein the testing center is adapted to detect a jitter in transit of the packets over one of the links (col. 4 lines 56-61).

For claim 30, Thadani et al. disclose wherein the testing center is operative to determine which of the links in the network were traversed by the at least one intercepted packet (figure 1, col. 3 lines 19-21).

For claim 31, Thadani et al. disclose method and apparatus for dynamic distributed packet tracing and analysis, the method comprising:

a computer-readable medium in which program instructions are stored, which instructions, when read by a computer, cause the computer to specify a packet filtering criterion (figure 2, col. 6 lines 1-9) and to engender transmission of one or more data packets meeting the criterion through the network from one of the end-points to another (figure 1, col. 4 lines 5-42), such that at least one of the data packets meeting the criterion is intercepted using the network agents at the respective locations in the network traversed by the packets (figure 1, col. 4 lines 19-42), which agents record information regarding the at least one intercepted packet at the respective locations (figure 1, col. 4 lines 19-42), and which instructions further cause the computer to receive and process the recorded information so as to analyze a route of the at least one intercepted packet through the network (figure 1, col. 4 lines 62-67 and col. 5 lines 1-16).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6, 13-14, 19, 22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thadani et al. (U.S. Patent 5,648,965) in view of McKee et al. (U.S. Patent 5,477,531).

For claims 6, 13-14, 19, 22 and 29, Thadani et al. disclose wherein the plurality of end-points comprises a source end-point and a destination end-point (figure 1, col. 3 lines 17-26).

However, Thadani et al. do not disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion.

In an analogous art, McKee et al. disclose wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion (col. 4 lines 3-20). McKee et al. disclose



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further wherein the plurality of end-points comprises a source end-point and a destination end-point, and wherein transmitting the one or more data packets comprises transmitting original packets from the source end-point to the destination end-point, and receiving corresponding echo packets returned from the destination end-point, both the original and the echo packets meeting the criterion, and wherein determining the transit times comprises determining round-trip transit times by intercepting both the original packets and the corresponding echo packets (col. 6 lines 17-20 as set forth in claim 13); wherein transmitting the original packets comprises transmitting a Transport Control Protocol (TCP) initialization packet having a first, specified TCP sequence number, and wherein receiving the echo packets comprises receiving a TCP connection acknowledgment packet having a second TCP sequencer number, which is determined responsive to the first TCP sequence number (col. 4 lines 3-20 as set forth in claim 14); wherein the at least one traffic agent comprises first and second traffic agents at respective network endpoints, and wherein responsive to receiving one of the packets with the pattern of data transmitted by the first traffic agent, the second traffic agent returns a data packet comprising the pattern of data to the first traffic agent (col. 4 lines 3-20 as set forth in claim 19); wherein the plurality of end-points comprises a source end-point and a destination end-point, and wherein the one or more data packets meeting the criterion comprise original packets sent from the source end-point to the destination end-point and echo packets returned from the destination end-point responsive to the original packets, both the original and the echo packets meeting the criterion (col. 4 lines 3-20 as set forth in claim 22) and wherein the determined transit times comprises round-trip transit times, determined by transmitting original packets from a source end-point to a destination end-point, and receiving corresponding echo packets returned from the destination

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end-point responsive to the original packets, both the original and the echo packets meeting the criterion, wherein both the original packets and the corresponding echo packets are intercepted by the one or more network agents (col. 6 lines 17-20 as set forth in claim 29).

One skilled in the art would have recognized transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion to use the teachings of McKee et al. in the system of Thadani et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the transmitting original packets from the source end-point to the destination end-point, and receiving echo packets returned from the destination end-point, both the original and the echo packets meeting the at least one criterion as taught by McKee et al. in Thadani et al.'s system with the motivation being to measure the round trip time (Abstract line 8).

6. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thadani et al. (U.S. Patent 5,648,965) in view of Iddon et al. (U.S. Patent 5,634,009).

For claims 7 and 23, Thadani et al. do not disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF). In an analogous art, Iddon et al. disclose wherein the network agents comprise Remote Network Monitoring (RMON) elements, in accordance with one or more applicable standards defined by the Internet Engineering Task Force (IETF) (col. 5 line 51).

One skilled in the art would have recognized Remote Network Monitoring (RMON) elements to use the teachings of Iddon et al. in the system of Thadani et al. Therefore, it would

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have been obvious to one of ordinary skill in the art at the time invention, to use the Remote Network Monitoring (RMON) elements as taught by Iddon et al. in Thadani et al.'s system with the motivation being determine a minimum set of tables (col. 5 lines 54-56).

*Response to Arguments*

7. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

*Contact Information*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

*Toan D. Nguyen*

Toan D. Nguyen